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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,922	09/11/2003	William R. Hancock	H0005143-1611	6000

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EXAMINER
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MOAZZAMI, NASSER G

ART UNIT	PAPER NUMBER
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2136

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/659,922	<b>Applicant(s)</b> HANCOCK, WILLIAM R.	
	<b>Examiner</b> Nasser G. Moazzami	<b>Art Unit</b> 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 12, 13 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 23 and 24 is/are allowed.
- 6) ☒ Claim(s) 1-8, 12-13, and 17-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. This is in response to applicant's amendment dated 06/30/2006 with the following results.
2. No claims have been canceled or added. Therefore, claims 1-8, 12-13, and 17-24 remain pending in this application.

### ***Response to Arguments***

3. Applicant's arguments filed on 06/30/2006 have been fully considered but they are not persuasive.

With respect to rejection of the claims under 112, first paragraph, since the added material to the specification introduced new matter and should be canceled, the rejection of the claims under 112, first paragraph would be maintained by examiner for lack of support with the written description requirement.

With respect to rejection of the claims under 102, AAPA and Lopez clearly disclose that portion of the virtual address is combined with further bits to point to a second table and from there to the third table and further examiner would like to point out that the claim language is not clearly calling for the entire virtual address being combined and for the control and valid bits for the pages, AAPA in paragraph 3 discloses access rights and active memory blocks and whether the block is valid or not.

As in regard to references not addressing elements of claim 7 (two or three tables for address translation), Lopez's figure 1 clearly discloses a multi-level table walks for address translation. Therefore, the rejections of the claims to be proper.

### ***Specification***

4. The amendments filed June 30, 2006 and is objected to under 35 U.S.C. 132(a) because they introduce new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the amended paragraphs 0010 and 0011 on page 2. Applicant has amended these paragraphs as noted in Applicant's Remarks of June 30, 2006 to provide supports for the claim limitation "a single half-word in the second level table correspond to two hardware register words" in order to overcome the claim rejection under 35 USC 112, first paragraph for failing to comply with the written description requirement. The amended portion of the Specification has added new matter into the application.

The Detailed Description of the Invention as originally filed did not disclosed "a single half-word in the second level table correspond to two hardware register words". Applicant is required to cancel the new matter in the reply to this Office Action.

### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

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art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 3-4, 8, and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "a single half-word in the second level table corresponds to two hardware register words" is not supported by the disclosure.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-2, 12, 17-19, and 21 are rejected under 35 U.S.C. 102(a and b) as being anticipated by Applicant Admitted Prior Art (AAPA) and Lopez-Aguado (US Patent No. 5,586,283).

As for claims 1, 12, and 17-18, AAPA and Lopez disclose a method of translating a virtual address to a physical address in a real time operating system, the method comprising: indexing into a first level table using a portion of the virtual address;

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generating an offset to a second level table based on an entry in the first level table combined with a portion of the virtual address; and combining the virtual address with an entry in the second level table obtained using the offset **[portion or the virtual address points to a first table, the entry pointed to is combined with further bits point to a second table, the entry in the second table is combined with further bits to point to an entry in a third table (see AAPA's page 1, paragraph 0004; see Lopez's Fig. 1).**

As for claims 2, 19, and 21, AAPA discloses that the entry in the table comprises control bits and valid bits for the pages **[see page 1, paragraph 0003]**

### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 5-7, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA or Lopez in view of a well known features in which official notice is taken.

As for claims 5-7, 13, 20 disclose the claimed invention, but fail to specifically disclose concatenating the virtual address with bits from the entry in the second level table and a process ID to fill control hardware registers. However, concatenating virtual

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address with the process ID is well known in the art in order to keep track of the memory spaces and the process that is accessing that particular location **[for example see patent number 6,643,759 issued to Anderson]**. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the current invention to include process ID in accessing the memory location for that particular process.

***Allowable Subject Matter***

11. Claims 23-24 are allowed

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

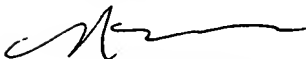
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13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser G. Moazzami whose telephone number is (571) 272-4195. The examiner can normally be reached on 7:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**NASSER MOAZZAMI**  
**PRIMARY EXAMINER**



08/17/2006